

## Year 9 Maths Expanding Worksheet

### Section A:

Use the Distributive law to expand the following:

1	$4(x+3)$ =	2	$7(m-5)$ =	3	$10(2a+3)$ =	4	$6(4p-3)$ =
5	$3(7-a)$ =	6	$3(4-2a+3b)$ =	7	$7(5x-2y+4)$ =	8	$-2(4-3a)$ =
9	$-6(5m+2)$ =	10	$-5(4x+2y-1)$ =	11	$-8(3-4m+2p)$ =	12	$-5(2x+3+y)$ =
13	$a(2a+b)$ =	14	$x(3x-4)$ =	15	$m(7-3m)$ =	16	$xy(2x-3y)$ =
17	$2c(3c^2-4)$ =	18	$5m(4-3m)$ =	19	$-3p(5p+1)$ =	20	$-7a(2-3a^2)$ =
21	$-4y(x+2y)$ =	22	$-3d(2d-4e)$ =	23	$-3a(2a-3b)$ =	24	$-3p(2-3p+4p^2)$ =

### Section B:

Use the distributive Law to expand and then collect like terms to give the answer in simplest form:

1	$2(a+1)+3(a+2)$ = =	2	$5(x+4)+2(x+7)$ = =	3	$4(2x-1)+3(x-5)$ = =	4	$5(2y-5)+8(3y-1)$ = =
5	$3(3p-5)-7(2p+3)$ = =	6	$6(3a+5)-3(2a-5)$ = =	7	$4(y-6)-5(3y-1)$ = =	8	$3(2-m)-3(3-4m)$ = =
9	$x(x+2)+3(x+2)$ = =	10	$y(y-4)+3(y-4)$ = =	11	$2r(r+4)-4(r+4)$ = =	12	$5a(a+3)-3(a+3)$ = =
13	$8(2-a)+2a(a-3)$ = =	14	$3m(m-2)-2(m-2)$ = =	15	$c(c-5)-5(c-5)$ = =	16	$y(y-6)-6(y-6)$ = =
17	$3(a+5)+2(2a-3)$ = =	18	$5(3x-1)-2(4-x)$ = =	19	$x(x+5)-3(x+5)$ = =	20	$5(y-3)-2y(y-3)$ = =
21	$2ab(3b+a)+5ab^2$ = =	22	$3xy(y-x)-4x^2y$ = =	23	$5p(2m+p)-6mp$ = =	24	$9ab^2-2ab(3-4b)$ = =

Section A:

Use the Distributive law to expand the following:

<sup>1</sup>	$4(x+3)$ $= 12x+3$	<sup>2</sup>	$7(m-5)$ $= 7m-35$	<sup>3</sup>	$10(2a+3)$ $= 20a+30$	<sup>4</sup>	$6(4p-3)$ $= 24p-18$
<sup>5</sup>	$3(7-a)$ $= 21-3a$	<sup>6</sup>	$3(4-2a+3b)$ $= 12-6a+9b$	<sup>7</sup>	$7(5x-2y+4)$ $= 35x-14y+28$	<sup>8</sup>	$-2(4-3a)$ $= -8+6a$
<sup>9</sup>	$-6(5m+2)$ $= -30m-12$	<sup>10</sup>	$-5(4x+2y-1)$ $= -20x-10y+5$	<sup>11</sup>	$-8(3-4m+2p)=$ $= -24+32m-16p$	<sup>12</sup>	$-5(2x+3+y)$ $= -10x-15-1y$
<sup>13</sup>	$a(2a+b)$ $= 2a^2+ab$	<sup>14</sup>	$x(3x-4)$ $= 3x^2-4x$	<sup>15</sup>	$m(7-3m)$ $= 7m-3m^2$	<sup>16</sup>	$xy(2x-3y)$ $= 2x^2y-3xy^2$
<sup>17</sup>	$2c(3c^2-4)$ $= 2a^2+ab$	<sup>18</sup>	$5m(4-3m)$ $= 2a^2+ab$	<sup>19</sup>	$-3p(5p+1)$ $= 2a^2+ab$	<sup>20</sup>	$-7a(2-3a^2)$ $= 2a^2+ab$
<sup>21</sup>	$-4y(x+2y)$ $= -4xy-8y^2$	<sup>22</sup>	$-3d(2d-4e)$ $= -6d^2+12de$	<sup>23</sup>	$-3a(2a-3b)$ $= -6a^2+9ab$	<sup>24</sup>	$-3p(2-3p+4p^2)$ $= -6p+9p^2-12p^3$

Section B:

Use the distributive Law to expand and then collect like terms to give the answer in simplest form:

<sup>1</sup>	$2(a+1)+3(a+2)$ $= 2a+2+3a+6$ $= 5a+8$	<sup>2</sup>	$5(x+4)+2(x+7)$ $= 5x+20+2a+14$ $= 7x+34$	<sup>3</sup>	$4(2x-1)+3(x-5)$ $= 8x-4+3x-15$ $= 11x-19$	<sup>4</sup>	$5(2y-5)+8(3y-1)$ $= 10y-25+24y-8$ $= 24y-33$
<sup>5</sup>	$3(3p-5)-7(2p+3)$ $= 9p-15-14p-21$ $= -5p-36$	<sup>6</sup>	$6(3a+5)-3(2a-5)$ $= 18a+30-6a+15$ $= 12a+45$	<sup>7</sup>	$4(y-6)-5(3y-1)$ $= 4y-24-15y+5$ $= -11y-19$	<sup>8</sup>	$3(2-m)-3(3-4m)$ $= 6-3m-9+12m$ $= 9m-3$
<sup>9</sup>	$x(x+2)+3(x+2)$ $= x^2+2x+3x+6$ $= x^2+5x+6$	<sup>10</sup>	$y(y-4)+3(y-4)$ $= y^2-4y+3y-12$ $= y^2-y-12$	<sup>11</sup>	$2r(r+4)-4(r+4)$ $= 2r^2+8r-4r-16$ $= 2r^2+4r-16$	<sup>12</sup>	$5a(a+3)-3(a+3)$ $= 5a^2+15a-3a-9$ $= 5a^2+12a-9$
<sup>13</sup>	$8(2-a)+2a(a-3)$ $= 16-8a+2a^2-6a$ $= 2a^2-14a+16$	<sup>14</sup>	$3m(m-2)-2(m-2)$ $= 3m^2-6m-2m+2$ $= 3m^2-8m+2$	<sup>15</sup>	$c(c-5)-5(c-5)$ $= c^2-5c-5c+25$ $= c^2-10c+25$	<sup>16</sup>	$y(y-6)-6(y-6)$ $= y^2-6y-6y+36$ $= y^2-12y+36$
<sup>17</sup>	$3(a+5)+2(2a-3)$ $= 3a+15+4a-6$ $= 7a+9$	<sup>18</sup>	$5(3x-1)-2(4-x)$ $= 15x-5-8+2x$ $= 13x-13$	<sup>19</sup>	$x(x+5)-3(x+5)$ $= x^2+5x-3x-15$ $= x^2+2x-15$	<sup>20</sup>	$5(y-3)-2y(y-3)$ $= 5y-15-2y^2+6y$ $= -2y^2+11y-15$
<sup>21</sup>	$2ab(3b+a)+5ab^2$ $= 6ab^2+2a^2b+5ab^2$ $= 11ab^2+2a^2b$	<sup>22</sup>	$3xy(y-x)-4x^2y$ $= 3xy^2-3x^2y-4x^2y$ $= 3xy^2-7x^2y$	<sup>23</sup>	$5p(2m+p)-6mp$ $= 10mp+5p^2-6mp$ $= 4mp+5p^2$	<sup>24</sup>	$9ab^2-2ab(3-4b)$ $= 9ab^2-6ab+12ab^2$ $= 21ab^2-6ab$